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(71)Applicant : RICOH CO LTD
(72)Inventor : MORI KOICHI

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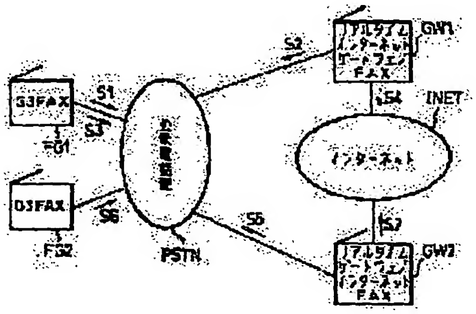
(54) CONTROL METHOD FOR REAL TIME INTERNET GATEWAY FACSIMILE TERMINAL

(57)Abstract:
PROBLEM TO BE SOLVED: To reduce the communication time by detecting whether or not terminals in compliance with the ITU-T recommendations T.30 protocol are included in a communication path and executing the T.38 compacted protocol that omits a signal exchange procedure from the ITU-T recommendations T.38 protocol in matching with the T.30 protocol when not included.
SOLUTION: First a G3 FAX terminal FG1 makes a call to a real time Internet gateway FAX terminal GW1 and transmits a destination telephone number to the terminal in terms of a pushbutton signal. Upon the receipt of the destination telephone number, the FAX terminal GW1 makes a connection request to a FAX terminal GW2 and informs it of the destination telephone number. The FAX terminal GW2 makes a call to the informed destination telephone number and when the FAX terminal FG2 being the destination detects the incoming call, the FAX terminal GW2 starts a prescribed real time transmission protocol to the FAX terminal GW1. Thus, a real time communication path is set up between the FAX terminals FG1 and FG2.


リアルタイム インターネット ゲートウェイ FAX
GW1
S2
S4
INET
インターネット
G3FAX
S1
S3
FG1
G3FAX
FG2
S6
PSTN
S5
S7
リアルタイム ゲートウェイ インターネット FAX
GW2

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CLAIMS

[Claim(s)]

[Claim 1] Group 3 facsimile terminal capabilities. The function to perform T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and to exchange drawing information. The function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information. It is the control method of the real-time Internet gateway facsimile apparatus equipped with the above, and when it does not detect and include whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in a communication path, it is characterized by performing the T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from the T.ITU-T recommendation 38 above-mentioned procedure was omitted between the partner real-time Internet gateway facsimile apparatus.

[Claim 2] Group 3 facsimile terminal capabilities. The function to perform T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and to exchange drawing information. The function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information. It is the control method of the real-time Internet gateway facsimile apparatus equipped with the above. Detect, and when not contained, whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in a communication path Between the partner real-time Internet gateway facsimile apparatus While performing the T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from the T.ITU-T recommendation 38 above-mentioned procedure was omitted When the terminal unit of T.ITU-T recommendation 30 procedure is contained in a communication path, it is characterized by performing T.ITU-T recommendation 38 procedure between the partner real-time Internet gateway facsimile apparatus.

[Claim 3] It is the control method of the real-time Internet gateway facsimile apparatus according to claim 1 or 2 characterized by performing detection of whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in the aforementioned communication path at a transmitting-side terminal.

[Claim 4] It is the control method of the real-time Internet gateway facsimile apparatus according to claim 1 or 2 characterized by performing detection of whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in the aforementioned communication path by the negotiation between a transmitting-side terminal and a receiving-side terminal.

[Claim 5] Group 3 facsimile terminal capabilities. The function to perform T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and to exchange drawing information. The function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information. It is the control method of the real-time Internet gateway facsimile apparatus equipped with the above. a transmitting-side terminal Based on the destination information specified to be the transmitting destination, it detects whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in the communication path in the drawing information transmission at that time. When the terminal unit of T.ITU-T recommendation 30 procedure is not contained in the communication path in the drawing information transmission at that time The T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from the T.ITU-T recommendation 38 above-mentioned procedure was omitted between receiving-side terminals is performed. When the terminal unit of T.ITU-T recommendation 30 procedure is contained in the communication path in the drawing information transmission at that time It is characterized by notifying the specified destination information to the airraid side real-time Internet gateway facsimile apparatus, performing the T.ITU-T recommendation 38 above-mentioned procedure, and transmitting drawing information to the destination.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the control method of the real-time Internet gateway facsimile apparatus equipped with group 3 facsimile terminal capabilities, the function to perform T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and to exchange drawing information, and the function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information.
[0002]
[Description of the Prior Art] In recent years, communication system (henceforth "mailed type Internet facsimile communication system") which communicates facsimile drawing information is increasingly used using the E-mail exchanged on the Internet. The technical content is prescribed about such communication system by RFC (Request For Comments) 2301-2306 published from the organization which is summarizing the technical content about the Internet called IETF (Internet Engineering Task Force).
[0003] However, in this mailed type Internet facsimile communication system, since transmitting-side facsimile apparatus and the last destination facsimile apparatus do not necessarily communicate directly, the check of facsimile apparatus mutual communication capacity cannot carry out in instancy, but, for the reason, produces the situation where drawing information communication using the various functions (resolution, image-processing capacity, etc.) of facsimile apparatus cannot be performed. Moreover, time is taken until a transmitting-side user is notified of a communication result, since the notice of a communication result cannot be performed in instancy, either, and the situation where management when needs, such as retransmission of message, arise is overdue is also produced.
[0004] Then, two or more real-time Internet gateway facsimile apparatus equipped with the function to exchange facsimile apparatus and drawing information through a public network as facsimile communication system using the Internet, and the function to exchange information through the Internet are prepared, and the real time type Internet facsimile communication system which realizes facsimile communication between facsimile apparatus on real time through the Internet is being proposed using these two real-time Internet gateway facsimile apparatus. The detail of the proposal of this real time type Internet facsimile communication system is collected, and is due to be released to ITU-T recommendation T.38.
[0005] In such real time type Internet facsimile communication system, call origination of the transmitting-side facsimile apparatus is carried out to the transmitting-side real-time Internet gateway facsimile apparatus, and it notifies the destination telephone number, and notifies and carries out the connection request of the destination telephone number notified from transmitting-side facsimile apparatus to the receiving-side real-time Internet gateway facsimile apparatus at the transmitting-side real-time Internet gateway facsimile apparatus.
[0006] The receiving-side real-time Internet gateway facsimile apparatus starts a real-time predetermined transmission control procedure while starting a group 3 facsimile-transmission procedure predetermined in between receiving-side facsimile apparatus, if call origination is carried out to the notified destination telephone number and a circuit is established.
[0007] Thereby, the transmitting-side real-time Internet gateway facsimile apparatus performs a real-time transmission control procedure predetermined in between the receiving-side real-time Internet gateway facsimile apparatus while starting a group 3 facsimile-transmission procedure between transmitting-side group 3 facsimile apparatus.
[0008] Consequently, through the transmitting-side real-time Internet gateway facsimile apparatus, the Internet, and the receiving-side real-time Internet gateway facsimile apparatus, the real time facsimile communication of transmitting-side facsimile apparatus is attained between receiving-side facsimile apparatus, and it can transmit drawing information to real time.

[0009] Therefore, in this real time type Internet facsimile communication system, since a communication result is immediately obtained while transmitting-side facsimile apparatus can transmit the drawing information according to the communication capacity of receiving-side facsimile apparatus, since the check of facsimile apparatus mutual communication capacity can carry out to real time, resending operation etc. can be performed quickly.

[0010]

[Problem(s) to be Solved by the Invention] However, there are following un-arranging in such real time type Internet facsimile communication system.

[0011] Namely, considering the case where group 3 facsimile communication facility is added to the real-time Internet gateway facsimile apparatus In this case, the drawing information communication between the real-time Internet gateway facsimile apparatus In spite of could carry out directly through the Internet, when the real time type Internet facsimile communications processing of T.advice 38 usual procedure is performed, An operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment in T.advice 38 procedure is also performed, and, for the reason, it produces un-arranging [that communication time becomes long unnecessarily].

[0012] this invention is made in view of this actual condition, and aims at offering the control method of the real-time Internet gateway facsimile apparatus which can shorten communication time.

[0013]

[Means for Solving the Problem] The function in which this invention performs T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and exchanges drawing information with group 3 facsimile terminal capabilities, In the control method of the real-time Internet gateway facsimile apparatus equipped with the function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information Detect, and when not contained, whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in a communication path It is made to perform the T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from the T.ITU-T recommendation 38 above-mentioned procedure was omitted between the partner real-time Internet gateway facsimile apparatus.

[0014] Moreover, group 3 facsimile terminal capabilities and the function to perform T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and to exchange drawing information, In the control method of the real-time Internet gateway facsimile apparatus equipped with the function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information Detect, and when not contained, whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in a communication path Between the partner real-time Internet gateway facsimile apparatus While performing the T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from the T.ITU-T recommendation 38 above-mentioned procedure was omitted When the terminal unit of T.ITU-T recommendation 30 procedure is contained in a communication path, it is made to perform T.ITU-T recommendation 38 procedure between the partner real-time Internet gateway facsimile apparatus.

[0015] Moreover, it is good for a transmitting-side terminal to perform detection of whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in the aforementioned communication path. Moreover, it is good to be made to perform detection of whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in the aforementioned communication path by the negotiation between a transmitting-side terminal and a receiving-side terminal.

[0016] Moreover, group 3 facsimile terminal capabilities and the function to perform T.facsimile apparatus and ITU-T recommendation 30 procedure through a public network, and to exchange drawing information, In the control method of the real-time Internet gateway facsimile apparatus equipped with the function to perform T.ITU-T recommendation 38 procedure between partner terminals through the Internet, and to exchange information A transmitting-side terminal detects whether the terminal unit of T.ITU-T recommendation 30 procedure is contained in the communication path in the drawing information transmission at that time based on the destination information specified to be the transmitting destination. when the terminal unit of T.ITU-T recommendation 30 procedure is not contained in the communication path in the drawing information transmission at that time The T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from the T.ITU-T recommendation 38 above-mentioned procedure was omitted between receiving-side terminals is performed. When the terminal unit of T.ITU-T recommendation 30 procedure is contained in the communication path in the drawing information transmission at that time The specified destination information is notified to the airraid side real-time Internet gateway facsimile apparatus, the T.ITU-T recommendation 38 above-mentioned procedure is performed, and drawing information is transmitted to the destination.

[0017]

[Embodiments of the Invention] Hereafter, the form of operation of this invention is explained in detail, referring to an accompanying drawing.
[0018] Drawing 1 shows an example of the real time type Internet facsimile communication system concerning one example of this invention.
[0019] This real time type Internet facsimile communication system consists of real-time Internet gateway facsimile apparatus GW1 and GW2 equipped with the function to connect with the group 3 facsimile apparatus FG1 and FG2 and the public telephone network PSTN which were connected to the public telephone network PSTN, and to perform facsimile communication among the group 3 facsimile apparatus FG1 and FG2, group 3 facsimile terminal capabilities, and the function to connect with Internet INET and to perform a real-time predetermined transmission control procedure through Internet INET.
[0020] Here, while the group 3 facsimile apparatus FG1 and the real-time Internet gateway facsimile apparatus GW1 are installed in the same area, the group 3 facsimile apparatus FG2 and the real-time Internet gateway facsimile apparatus GW2 are installed in the same area, and those installation areas are remote place regions mutual.
[0021] Therefore, about the group 3 facsimile apparatus FG1, the real-time Internet gateway facsimile apparatus GW1 offers real time type Internet facsimile communication system communication service in this case, and the real-time Internet gateway facsimile apparatus GW2 offers real time type Internet facsimile communication system communication service about the group 3 facsimile apparatus FG2.
[0022] Drawing 2 shows the example of composition of the real-time Internet gateway facsimile apparatus GW (GW1, GW2).
[0023] In this drawing the system control section 1 Control processing of each part of this real-time Internet gateway facsimile apparatus, facsimile-transmission control-procedure (T.ITU-T recommendation 30 procedure) processing -- and It is what performs various control processings, such as real-time transmission-control-procedures (T.ITU-T recommendation 38 procedure) processing. system memory 2 When performing the control processing program which the system control section 1 performs, and a processing program, while memorizing various required data etc. Constituting the work area of the system control section 1, the parameter memory 3 is for memorizing various kinds of information peculiar to this real-time Internet gateway facsimile apparatus, and the clock circuit 4 outputs the present time entry.
[0024] A scanner 5 is for reading a manuscript picture in predetermined resolution, and a plotter 6 is for carrying out the record output of the picture in predetermined resolution, the operation display 7 is for operating this facsimile apparatus, and it consists of various kinds of operation keys and various kinds of drops.
[0025] While carrying out coding compression of the drawing signal, the coding decryption section 8 is for decrypting the drawing information by which coding compression is carried out to the original drawing signal, and the error detection at the time of drawing information reception is used as a key objective in this case. Moreover, image storage equipment 9 is for memorizing many drawing information in the state where coding compression was carried out.
[0026] A network control unit 10 is for connecting this real-time Internet gateway facsimile apparatus to a public telephone network PSTN, and is equipped with the automatic sending-and-receiving function.
[0027] The group 3 facsimile modem 11 is for realizing the modem function of group 3 facsimile, and is equipped with the slow-modem function (V. 21 modems) for exchanging a transmission-control-procedure signal, and the fast modem function (V. 17 modems, a V.34 modem, V.29 modem, V.27ter modem, etc.) for mainly exchanging drawing information.
[0028] The Internet communications control section 12 connects this real-time Internet gateway facsimile apparatus to Internet INET. It is for exchanging various data through Internet INET. the TCP/IP packet analysis section 13 It is for analyzing the TCP/IP packet which the Internet communications control section 12 received, and taking out receipt information. the group 3 protocol information generation section 14 In a real-time transmission control procedure, the receipt information outputted from the TCP/IP packet analysis section 13 is changed into corresponding group 3 transmission-control-procedure signaling information.
[0029] The group 3 protocol information extraction section 15 is for taking out the group 3 facsimile-transmission procedure information to transmit in a real-time transmission control procedure, the TCP/IP packet transducer 16 is for changing into TCP/IP packet data the group 3 facsimile-transmission procedure information outputted from the group 3 protocol information extraction section 15, and the output data are applied to the Internet communications control section 12.
[0030] These, the system control section 1, system memory 2, the parameter memory 3, the clock circuit 4, a scanner 5, a plotter 6, the operation display 7, the coding decryption section 8, image storage equipment 9, a network control unit 10, the group 3 facsimile modem 11, and the group 3 protocol information generation section 14 -- and The group 3 protocol information extraction section 15 is connected to the internal bus 17, and the exchange of the data between

each of these elements is performed mainly through this internal bus 17.

[0031] Moreover, the exchange of the data between a network control unit 10 and the group 3 facsimile modem 11 is performed directly.

[0032] Now, in this real time type Internet facsimile communication system, when transmitting drawing information to the group 3 facsimile apparatus FG2 from the group 3 facsimile apparatus FG1 (refer to drawing 1 hereafter.), real-time formal ** by T.advice 38 procedure is performed.

[0033] That is, call origination of the group 3 facsimile apparatus FG1 is first carried out to the real-time Internet gateway facsimile apparatus GW1 (S1).

[0034] Thereby, the real-time Internet gateway facsimile apparatus GW1 carries out an arrival-of-the-mail response, and answers a predetermined tone signal to the group 3 facsimile apparatus FG1 (S2).

[0035] If the group 3 facsimile apparatus FG1 detects the tone signal from the real-time Internet gateway facsimile apparatus GW1, to a user, the input request of the telephone number of destination facsimile apparatus (in this case, it is the group 3 facsimile apparatus FG2) will be carried out, and, thereby, a user will do the operation input of the telephone number of destination facsimile apparatus.

[0036] Next, the group 3 facsimile apparatus FG1 transmits the destination telephone number in which the operation input was done by the user to the real-time Internet gateway facsimile apparatus GW1 with the push button signal PB (S3).

[0037] It notifies the destination telephone number while carrying out the connection request of the real-time Internet gateway facsimile apparatus GW1 to the real-time Internet gateway facsimile apparatus GW2, if the push button signal PB receives the destination telephone number from the group 3 facsimile apparatus FG1 (S4).

[0038] Call origination of the real-time Internet gateway facsimile apparatus GW2 which received the connection request from the real-time Internet gateway facsimile apparatus GW1 is carried out to the destination telephone number then notified (S5).

[0039] If the group 3 facsimile apparatus FG2 of the call origination point carries out arrival-of-the-mail detection, an arrival-of-the-mail response will be carried out (S6), and, thereby, the real-time Internet gateway facsimile apparatus GW2 will start a real-time predetermined transmission control procedure to the real-time Internet gateway facsimile apparatus GW1 (S7).

[0040] Thus, a communication path is formed through a public telephone network PSTN between the group 3 facsimile apparatus FG1 and the real-time Internet gateway facsimile apparatus GW1. A communication path is formed through Internet INET between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW2. By a communication path being formed through a public telephone network PSTN between the real-time Internet gateway facsimile apparatus GW1 and the group 3 facsimile apparatus FG1 A real time communication path is formed between the group 3 facsimile apparatus FG1 and the group 3 facsimile apparatus FG2. after it The real time communication path between this group 3 facsimile apparatus FG1 and the group 3 facsimile apparatus FG2 is used, and drawing information is transmitted to the group 3 facsimile apparatus FG2 from the group 3 facsimile apparatus FG1.

[0041] Moreover, in this real time type Internet facsimile communication system, since the real-time Internet gateway facsimile apparatus GW1 and GW2 are equipped with the group 3 facsimile-apparatus function, as shown in drawing 3 , the drawing information send action from the real-time Internet gateway facsimile apparatus GW1 to the group 3 facsimile apparatus FG2 of them also becomes possible, for example. Moreover, between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW2, communication operation of T.advice 38 procedure is performed also in this case.

[0042] In this case, first, the real-time Internet gateway facsimile apparatus GW1 will require the input of the first destination information of a user, if a transmitting manuscript is set.

[0043] In this case, since a user transmits drawing information to the group 3 facsimile apparatus FG2 through the real-time Internet gateway facsimile apparatus GW2, he inputs the address of the real-time Internet gateway facsimile apparatus GW2 as first destination information.

[0044] Thus, when the address information on the Internet is inputted, next, the real-time Internet gateway facsimile apparatus GW1 makes a user input the telephone number of the last destination as first destination information.

[0045] Thereby, a user does the operation input of the telephone number of the group 3 facsimile apparatus FG2 in this case. Thus, if the effective telephone number as the last destination is inputted, the real-time Internet gateway facsimile apparatus GW1 will recognize it as the last destination being group 3 facsimile apparatus (FG2).

[0046] Therefore, if a user orders it a transmitting start in this case, it will notify the destination telephone number of the group 3 facsimile apparatus FG2 as the last destination while carrying out the connection request of the real-time Internet gateway facsimile apparatus GW1 to the real-time Internet gateway facsimile apparatus GW2 (S11).

[0047] Call origination of the real-time Internet gateway facsimile apparatus GW2 which received the connection request from the real-time Internet gateway facsimile apparatus GW1 is carried out to the destination telephone number then notified (S12).

[0048] If the group 3 facsimile apparatus FG2 of the call origination point carries out arrival-of-the-mail detection, an arrival-of-the-mail response will be carried out (S13), and, thereby, the real-time Internet gateway facsimile apparatus GW2 will start a real-time predetermined transmission control procedure to the real-time Internet gateway facsimile apparatus GW1 (S14).

[0049] Thus, a communication path is formed through Internet INET between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW2. By a communication path being formed through a public telephone network PSTN between the real-time Internet gateway facsimile apparatus GW1 and the group 3 facsimile apparatus FG1 A real time communication path is formed between the real-time Internet gateway facsimile apparatus GW1 and the group 3 facsimile apparatus FG2. after it The real time communication path between this real-time Internet gateway facsimile apparatus GW1 and the group 3 facsimile apparatus FG2 is used. Drawing information is transmitted to the group 3 facsimile apparatus FG2 from the real-time Internet gateway facsimile apparatus GW1.

[0050] Moreover, in this real time type Internet facsimile communication system, since the real-time Internet gateway facsimile apparatus GW1 and GW2 are equipped with the group 3 facsimile-apparatus function, as shown in drawing 4 , the drawing information send action from the real-time Internet gateway facsimile apparatus GW1 to the group 3 facsimile apparatus FG1 of them also becomes possible, for example.

[0051] In this case, first, the real-time Internet gateway facsimile apparatus GW1 will require the input of the first destination information of a user, if a transmitting manuscript is set.

[0052] In this case, since a user transmits drawing information to the group 3 facsimile apparatus FG1, he inputs the telephone number of the group 3 facsimile apparatus FG1 as first destination information.

[0053] When the telephone number is inputted, as first destination information thus, the real-time Internet gateway facsimile apparatus GW1 Call origination is carried out to the telephone number of the specified destination using a public telephone network PSTN (S21). by that cause When the group 3 facsimile apparatus FG1 of the destination carries out a call-in response (S22), the real-time Internet gateway facsimile apparatus GW1 A group 3 facsimile-transmission procedure predetermined in between the group 3 facsimile apparatus FG1 of the destination is performed after it, and a drawing information send action is performed.

[0054] Furthermore, as shown in drawing 5 in this case, communication operation between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW2 can also be performed. In this case, between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW1, the advice T.38 shortening procedure mentioned later is performed, and drawing information communication is realized.

[0055] That is, if, as for the real-time Internet gateway facsimile apparatus GW1, a transmitting manuscript is first set in this case, the input of the first destination information will be required of a user.

[0056] In this case, since a user transmits drawing information to the real-time Internet gateway facsimile apparatus GW2, he inputs the address of the real-time Internet gateway facsimile apparatus GW2 as first destination information.

[0057] Thus, when the address information on the Internet is inputted, next, the real-time Internet gateway facsimile apparatus GW1 makes a user input the telephone number used as the last destination as first destination information.

[0058] In this case, since the address of the last destination is already inputted, a user does not input the telephone number of the last destination. Thus, when the telephone number of the last destination is not inputted, the real-time Internet gateway facsimile apparatus GW1 recognizes it as the last destination being the real-time Internet gateway facsimile apparatus GW2.

[0059] Therefore, if a user orders it a transmitting start in this case, it will not notify the destination telephone number of the last destination while carrying out the connection request of the real-time Internet gateway facsimile apparatus GW1 to the real-time Internet gateway facsimile apparatus GW2 (S31).

[0060] Thus, in the state where the destination telephone number of the last destination is not notified, if a connection request is carried out from the real-time Internet gateway facsimile apparatus GW1 The real-time Internet gateway facsimile apparatus GW2 Carry out a connection response (S32) and a communication path is set up by that cause between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW1. An advice T.38 shortening procedure is performed after it between the real-time Internet gateway facsimile apparatus GW1 and the real-time Internet gateway facsimile apparatus GW2. Drawing information is transmitted to the real-time Internet gateway facsimile apparatus GW2 from the real-time Internet gateway facsimile apparatus GW1.

[0061] Thus, in this example, the real-time Internet gateway facsimile apparatus GW1 can perform the send action of four modes, and, as for both the real-time Internet gateway facsimile apparatus GW1, can perform communication operation of the real-time Internet gateway unit, and communication operation of group 3 facsimile apparatus.

[0062] Drawing 6 shows an example of the communication procedure of advice T.38. In addition, in this drawing, transmitting-side group 3 facsimile (G3FAX), the transmitting-side gateway (GW), the receiving-side gateway, and receiving-side group 3 facsimile are equivalent to the group 3 facsimile apparatus FG1, the real-time Internet gateway facsimile apparatus GW1, the real-time Internet gateway facsimile apparatus GW2, and the group 3 facsimile apparatus FG2 of drawing 1 , respectively. Moreover, the signal exchanged between a transmitting side GW and a receiving side GW is a signal concerning a real-time transmission control procedure.

[0063] First, call origination of the transmitting-side G3FAX is carried out to a transmitting side GW, and it sends out the destination telephone number specified by the user with the push button signal PB. If a transmitting side GW carries out call-in detection, it will carry out a call-in response and, subsequently will receive the destination telephone number by the push button signal PB from transmitting-side G3FAX.

[0064] Next, transmitting-side G3FAX sends out the tone signal CNG of T.advice 30 procedure to a transmitting side GW, in order to require call connection. Thereby, a transmitting side GW notifies the destination telephone number while transmitting and carrying out the connection request of the connection-request packet to a receiving side GW. Thereby, while call origination of the receiving side GW is carried out to specified receiving-side G3FAX, it sends out the predetermined tone signal CNG and requires call connection, it transmits a connection-confirm packet to a transmitting side GW, and checks call connection.

[0065] Call origination is carried out from a receiving side GW, receiving-side G3FAX as which call connection was required carries out an arrival-of-the-mail response, the predetermined tone signal CED (called station recognition signal) is sent out, if a receiving side GW detects this tone signal CED, the signal (T30 IND:CED) showing the purport that Signal CED was detected is transmitted to a transmitting side GW, and, thereby, a transmitting side GW sends out the tone signal CED to transmitting-side G3FAX.

[0066] Subsequently, following a flag (Flags) signal, receiving-side G3FAX is a group 3 facsimile-transmission procedure signal, and sends out the signal DIS for notifying the signal CSI for notifying the signal NSF for notifying the option transmission function in the end of a local, and the recognition signal in the end of a local, and the standard transmission function in the end of a local one by one. If Signals NSF, CSI, and DIS are detected one by one while a receiving side GW will transmit a signal (T30 IND:Flags) to a transmitting side GW, if a flag signal is detected, it will transmit the signal (V21 HDLC:NSF/CSI/DIS) showing Signals NSF, CSI, and DIS to a transmitting side GW one by one.

[0067] Thereby, if a transmitting side GW starts sending out of a flag signal to transmitting-side G3FAX and a signal (V21 HDLC:NSF/CSI/DIS) is received when it receives a flag signal, it will transmit the signals NSF, CSI, and DIS which correspond, respectively to transmitting-side G3FAX.

[0068] By this, since transmitting-side G3FAX knows the recognition signal and transmission function of receiving-side G3FAX, it sets up a transmission function, modem speed, etc. which are then used based on the notified transmission function. Subsequently, following a flag signal, transmitting-side G3FAX is a group 3 facsimile-transmission procedure signal, sends out the signal DCS for notifying Signal TSI and the transmission function to be used for notifying the recognition signal in the end of a local one by one, and sends out the signal TCF for performing modem training at the notified modem speed further.

[0069] Thereby, if Signals TSI, DCS, and TCF are detected one by one while a transmitting side GW will transmit a signal (T30 IND:Flags) to a receiving side GW, if a flag signal is detected, it will transmit the signal (V21 HDLC:TSI/DCS) showing those signals TSI and DCS to a receiving side GW.

[0070] Thereby, if a receiving side GW starts sending out of the flag signal to receiving-side G3FAX and a signal (V21 HDLC:TSI/DCS) is received when it receives a flag signal, it will transmit the signals TSI and DCS which correspond, respectively, and Signal TCF to receiving-side G3FAX.

[0071] Receiving-side G3FAX will acquire the identification information of a partner terminal (transmitting-side G3FAX), if Signal TSI is received, it acquires the transmission function which will be used if Signal DCS is received, by it, sets up modem speed and receives Signal TCF.

[0072] And when the receiving result of Signal TCF is good, following a flag signal, receiving-side G3FAX is a group 3 facsimile-transmission procedure signal, and sends out the signal CFR for notifying the purport which reception preparation completed. If Signal CFR is detected while a receiving side GW will transmit a signal (T30 IND:Flags) to a transmitting side GW, if a flag signal is detected, it will transmit the signal (V21 HDLC:CFR) showing Signal CFR to a transmitting side GW.

[0073] Thereby, if a transmitting side GW starts sending out of a flag signal to transmitting-side G3FAX and a signal

(V21HDLC:CFR) is received when it receives a flag signal, it will transmit the corresponding signal CFR to transmitting-side G3FAX.

[0074] thus -- if transmitting preparation of drawing information is completed -- transmitting-side G3FAX -- the training (Training) signal for lithograph rhe NINGU of a modem -- sending out -- if drawing information is sent out and sending out of drawing information is ended behind the bottom -- a flag signal -- then, the signal EOP which notifies the purport which drawing information transmission ended is sent out

[0075] Moreover, if a training signal is detected from transmitting-side G3FAX, a transmitting side GW will divide into plurality the drawing information which transmitted the signal (T30 IND:Speed) to the receiving side GW, then was received from transmitting-side G3FAX, and will transmit to a receiving side GW by using each divided drawing information as packet data. And if Signal EOP is detected while transmitting a signal (T30 IND:Flags) to a receiving side GW, if a flag signal is detected from transmitting-side G3FAX, the signal (V21 HDLC:EOP) showing Signal EOP will be transmitted to a receiving side GW.

[0076] If the packet which carries drawing information is received, the training signal which corresponds on the other hand if a receiving side GW receives a signal (T30 IND:Speed) will be transmitted to receiving-side G3FAX, the division drawing information included in it is taken out one by one, the connected drawing information will be created and the drawing information will be transmitted to receiving-side G3FAX. Moreover, since sending out of the flag signal to receiving-side G3FAX is started and a signal (V21 HDLC:EOP) is received at this time after ending transmission of a pictorial, the corresponding signal EOP is transmitted to receiving-side G3FAX.

[0077] Moreover, if receiving-side G3FAX receives drawing information and Signal EOP is subsequently received following a flag signal after it performs lithograph rhe NINGU of a modem by the training signal received from the receiving side GW, it will recognize that reception of drawing information was completed. And receiving-side G3FAX transmits the signal MCF which notifies that to a receiving side GW following a flag signal, when the receiving result of the drawing information at that time is good.

[0078] If Signal MCF is detected while a receiving side GW will transmit a signal (T30 IND:Flags) to a transmitting side GW, if a flag signal is detected, it will transmit the signal (V21 HDLC:MCF) showing Signal MCF to a transmitting side GW.

[0079] Thereby, if a transmitting side GW starts sending out of a flag signal to transmitting-side G3FAX and a signal (V21HDLC:MCF) is received when it receives a flag signal, it will transmit the corresponding signal MCF to transmitting-side G3FAX.

[0080] Thereby, transmitting-side G3FAX recognizes having received drawing information normally by receiving-side G3FAX. After this, transmitting-side G3FAX restores a circuit, after sending out the signal DCN for ordering it circuit restoration following a flag signal to a transmitting side GW.

[0081] Thereby, a signal (T30 IND:Flags) and a signal (V21 HDLC:DCN) are transmitted to a receiving side GW from a transmitting side GW by the same procedure as ****. And from a transmitting side GW, a flag signal and Signal DCN are transmitted to receiving-side G3FAX one by one, and receiving-side G3FAX will restore a circuit, if Signal DCN is received.

[0082] Moreover, a transmitting side GW sends out the disconnect-request packet which requires the purport which cuts a communication path to a receiving side GW, if a receiving side GW receives a disconnect-request packet, will send out the disconnect-confirm packet showing the purport that cutting of a communication path was checked, to a transmitting side GW, and will end a series of communication operation.

[0083] Thereby, the circuit between transmitting-side G3FAX and a transmitting side GW and the circuit between receiving-side G3FAX and a receiving side GW are restored, and the real time communication path currently formed between transmitting-side G3FAX and receiving-side G3FAX is cut.

[0084] Thus, the facsimile-transmission procedure between transmitting-side G3FAX and receiving-side G3FAX is performed by the real-time transmission control procedure of a transmitting side GW and a receiving side GW in real time, and transmission of the drawing information from transmitting-side G3FAX to receiving-side G3FAX is made.

[0085] Here, the signal (T30IND: "a signal name") in drawing 6 is a signal for notifying the detection of a TONARU signal according to ITU-T recommendation T.30, and a signal (V21HDLC: "a signal name") is a signal for carrying the binary signal according to ITU-T recommendation T.30. Moreover, it expresses that it is the signal carried by "V. 21" ITU-T-recommendation V.21 modem, and "HDLC" expresses that it is the signal formed into the HDLC frame.

[0086] And a real-time transmission control procedure is realized between a transmitting side GW and a receiving side GW by exchanging such a signal.

[0087] Here, the connection-request packet sent out in case a transmitting side GW carries out a connection request to a receiving side GW, and the connection-confirm packet which a receiving side GW sends out to a transmitting side GW for a connection confirm have signal form as shown in drawing 7 . In addition, this signal form is prescribed by

ITU-T recommendation H.225.0, and, fundamentally, has the same signal form as the signal for call connection in the layer 3 of ISDN.

[0088] This connection-request packet (or connection-confirm packet) consists of the message type for discriminating the call number for discriminating whether it is that to which the protocol identifier for discriminating protocol specifications (a format, sequence, etc.) and its message participate in which call, and the contents of each message, transfer capacity, a sending agency number, a dispatch first-move number, and a user user.

[0089] It consists of the transfer mode which shows whether the information transfer capacity for the contents of the information to transmit to show whether they are either voice, non-restricting digital information, limit digital information, a 3.1kHz audio, a 7kHz audio or video, and the switching function to be used are line switching, and whether a "transfer capacity" information element is packet switching here, the information transfer rate showing the speed of information transfer, information showing an informational transfer form, information showing the protocol of user information

[0090] Moreover, a "sending agency number" information element expresses the telephone number of transmitting-side G3FAX, and a "dispatch first-move number" information element expresses the telephone number of receiving-side G3FAX. Moreover, a "user user" information element is for using for transfer of the information between users, and without being interpreted in middle, the contents of a this "user user" information element are transmitted to a transparent, and are transmitted to a partner user. In the case of this example, the information which expresses a purport equipped with the advice T.38 shortening procedure as a "user user" information element is set.

[0091] Drawing 8 shows an example of an advice T.38 shortening procedure.

[0092] First, to a receiving side GW, a transmitting side GW transmits and carries out the connection request of the connection-request packet, and notifies it. Thereby, a receiving side GW transmits a connection-confirm packet to a transmitting side GW, and checks call connection.

[0093] Subsequently, a receiving side GW is a group 3 facsimile-transmission procedure signal, and transmits the signal (V21 HDLC:NSF/CSI/DIS) for notifying the content of the signal DIS for notifying the signal CSI for notifying the signal NSF for notifying the option transmission function in the end of a local, and the recognition signal in the end of a local, and the standard transmission function in the end of a local to a transmitting side GW.

[0094] If a signal (V21HDLC:NSF/CSI/DIS) is received, since a transmitting side GW will know the recognition signal and transmission function of a receiving side GW, it sets up the transmission function then used based on the notified transmission function. Subsequently, a transmitting side GW is a group 3 facsimile-transmission procedure signal, and transmits (V21 HDLC:TSI/DCS) for notifying the content of the signal DCS for notifying Signal TSI and the transmission function to be used for notifying the recognition signal in the end of a local to a receiving side GW.

[0095] Thereby, based on the received signal (V21 HDLC:TSI/DCS), a receiving side GW acquires the identification information and the transmission function to be used of a partner terminal (transmitting side GW), as a reply signal, is a group 3 facsimile-transmission procedure signal, and transmits the signal (V21 HDLC:CFR) corresponding to the signal CFR for notifying the purport which reception preparation completed to a transmitting side GW.

[0096] Thereby, after a transmitting side GW sends out drawing information and ending sending out of drawing information, it sends out the signal (V21 HDLC:EOP) corresponding to the signal EOP which notifies the purport which drawing information transmission ended.

[0097] If a signal (V21 HDLC:EOP) is received, a receiving side GW sends out the signal (V21 HDLC:MCF) corresponding to the signal MCF which notifies that, when the receiving result of the drawing information at that time is good.

[0098] And if this signal (V21 HDLC:MCF) is received, a transmitting side GW sends out the disconnect-request packet which requires the purport which checks the purport which drawing information transmission completed, and sends out the signal (V21 HDLC:DCN) corresponding to Signal DCN to a transmitting side GW, then cuts a communication path to a receiving side GW. If a receiving side GW ends communication operation and a disconnect-request packet is received when it receives a signal (V21 HDLC:DCN), it will send out the disconnect-confirm packet showing the purport that cutting of a communication path was checked, to a transmitting side GW, and will end a series of communication operation.

[0099] Moreover, a transmitting side GW will end a series of communication operation, if a disconnect-confirm packet is received from a receiving side GW.

[0100] Thus, in an advice T.38 shortening procedure, since an operator's order of the signal for taking T.advice 30 procedure and adjustment from T.advice 38 procedure is omitted, it is cut down sharply and the quick drawing information send action of the time which communication operation of a transmitting side GW and a receiving side GW takes becomes possible.

[0101] Drawing 9 shows an example of processing of transmitting-side G3FAX.

[0102] First, call origination is carried out to a transmitting side GW (processing 107), and it supervises detecting a predetermined tone signal in a predetermined time from a transmitting side GW (NO loop of judgment 102,103). By the case where a predetermined tone signal is unreceivable from a transmitting side GW in a predetermined time, when the result of judgment 103 is set to YES, the error end of the send action at this time is carried out.

[0103] Moreover, when the result of judgment 102 is set to YES, the telephone number (destination number) of receiving-side G3FAX is made to input to a user by the case where a predetermined tone signal is receivable from a transmitting side GW in a predetermined time (processing 104).

[0104] Subsequently, the destination number in which the operation input was done by the user sends out to a transmitting side GW using the push button signal PB (processing 105), the modem speed which performs the predetermined procedure before transmission, sets up a transmission function, modem speed, etc. (processing 106), and performs and uses a modem training procedure determines (processing 107), a predetermined drawing information transmitting procedure performs, and transmitting drawing information transmits (processing 108).

[0105] Thus, after ending drawing information transmission, a transmission defensive hand's predetermined order is performed (processing 109), a circuit is restored, and the facsimile communications processing to a transmitting side GW is ended.

[0106] An example of processing of the real-time Internet gateway facsimile apparatus GW (GW1, GW2) is shown in drawing 10 -12.

[0107] In the state of standby, the real-time Internet gateway facsimile apparatus GW is supervising a manuscript being set to a scanner 5 by the user, receiving a connection-request packet from Internet INET, or carrying out call-in detection from a public telephone network PSTN (NO loop of judgment 201,202,203).

[0108] When the result of judgment 201 is set to YES, destination information is made to input to a user by the case where a manuscript is set to a scanner 5 by the user (processing 202). Subsequently, it investigates whether it was the Internet address where the destination information then inputted contains ". (period)" (judgment 205).

[0109] When the result of judgment 205 is set to YES, the input request of the telephone number of receiving-side group 3 facsimile apparatus is carried out to a user (processing 206). Since it is the case where communication of the case shown in drawing 3 is required when it investigates whether the effective telephone number was inputted (judgment 207) and the result of judgment 207 is set to YES by this processing 206, the advice T.38 normal mode is set to a transmitting mode (processing 208).

[0110] Moreover, since it is the case where communication of the case shown in drawing 5 is required when the result of judgment 207 is set to NO, advice T.38 express mode is set to a transmitting mode (processing 201). Moreover, since it is the case where the telephone number is inputted and is the case where communication of the case of drawing 4 is required when the result of judgment 205 is set to NO, G3FAX is set to a transmitting mode (processing 210).

[0111] Thus, if the result of waiting (NO loop of judgment 211) and judgment 211 is set to YES until a user operates the operation display 7 and orders it a drawing information transmitting start, after ending the set of a transmitting mode, the picture of a transmitting manuscript will be read with a scanner 5, coding compression of the image data obtained by it will be carried out by the coding double sign-ized section 8, and the drawing information acquired by it will be accumulated to image storage equipment 9 (processing 212).

[0112] Subsequently, although predetermined G3FAX transmitting processing was performed, carried out call origination to the specified destination and it accumulated to image storage equipment 9 when it investigated whether G3FAX is set to the transmitting mode (judgment 213) and the result of judgment 213 was set to YES, the destination is transmitted for information (processing 214). And the drawing information which carried out the completion of transmitting is eliminated from image storage equipment 9 (processing 215), and it returns to the standby state of judgment 201.

[0113] Moreover, when the result of judgment 213 is set to NO, it investigates whether the advice T.38 normal mode is set to the transmitting mode (judgment 216). When the result of judgment 216 is set to YES, while being processing of the advice T.38 normal mode and processing in false the signal transmitted and received between transmitting-side G3FAX Perform predetermined false real time type processing (false real-time transmission control procedure) in which processing between the receptionist sides GW is performed (processing 217), and after transmitting the accumulated drawing information to G3FAX of the last destination and ending the drawing information transmission It shifts to processing 215, the drawing information which carried out the completion of transmitting is eliminated from image storage equipment 9, and it returns to the standby state of judgment 201.

[0114] moreover, by the case where the advice T.38 express mode is set to the transmitting mode, when the result of judgment 216 is set to NO Transmitting processing of advice T.38 express mode mentioned above is performed (processing 218), and after transmitting the accumulated drawing information to G3FAX of the last destination and ending the drawing information transmission, it shifts to processing 215, the drawing information which carried out the completion of transmitting is eliminated from image storage equipment 9, and it returns to the standby state of judgment 201.

[0115] Moreover, when the result of judgment 202 is set to YES from Internet INET by the case where a connection-request packet is received, the information element of the connection-request packet which received is analyzed, and it investigates whether the significant value is included in the "dispatch first-move number" information element (judgment 221).

[0116] When the result of judgment 221 is set to YES, call origination is carried out to the destination (processing 222), and it investigates whether the destination is during the conversation (busy) (judgment 223). By the case of being connectable with the destination, when the result of judgment 223 is set to NO, drawing information is transmitted to reception receiving-side G3FAX of the advice T.38 normal mode mentioned above (processing 224), a circuit is restored (processing 225), this processing is ended, and it returns to the standby state of judgment 201.

[0117] Moreover, by the case where the destination is busy, when the result of judgment 223 is set to YES, a connection failure is notified to a transmitting side GW (processing 226), this processing is ended, and it returns to the standby state of judgment 201.

[0118] Moreover, by the case where the significant value is included in the "dispatch first-move number" information element, when the result of judgment 221 is set to NO, it investigates whether information "with an advice T.38 shortening procedure" is included in the "user user" information element (judgment 227).

[0119] When the result of judgment 227 is set to YES, after performing reception operation in the advice T.38 shortening procedure mode mentioned above (processing 228) and ending the reception operation, it returns to the standby state of judgment 201.

[0120] Moreover, when the result of judgment 227 is set to NO, after performing reception operation of the advice T.38 normal mode mentioned above (processing 229) and ending the reception operation, it returns to the standby state of judgment 201.

[0121] Moreover, when the result of judgment 203 is set to YES from a public telephone network PSTN by the case where call-in detection is carried out, a predetermined tone signal is answered to transmitting-side G3FAX (processing 230), and the destination number by the push button signal PB is received and saved to it (processing 231).

[0122] Subsequently, while setting the destination number saved at the "dispatch first-move number" information element, the connection-request packet which set information "with an advice T.38 shortening procedure" to the "user user" information element is created (processing 232), and the connection-request packet is transmitted to a receiving side GW (processing 233). It investigates whether the line connection to receiving-side G3FAX was made (judgment 234).

[0123] When the result of judgment 234 is set to YES from remote ** GW by the case where the signal of a real-time transmission control procedure is received, after performing transmitting processing (processing 235) of the advice T.38 normal mode mentioned above and ending the send action, it returns to the standby state of judgment 201.

[0124] Moreover, when the result of judgment 234 is set to NO from remote ** GW by the case where a connection failure is answered, cutting restoration of the circuit with transmitting-side G3FAX is carried out (processing 236), the send action at this time is refused, and it returns to the standby state of judgment 201.

[0125]

[Effect of the Invention] As explained above, since the T.38 shortening procedure in which an operator's order of the signal for taking T.ITU-T recommendation 30 procedure and adjustment from T.ITU-T recommendation 38 procedure was omitted is performed, according to this invention, the effect that communication time can be shortened sharply is acquired by the drawing information communication between the real-time Internet gateway facsimile apparatus.

[Translation done.]

* NOTICES *

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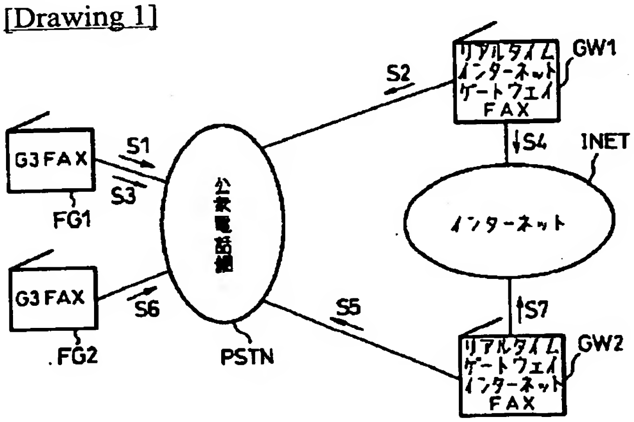
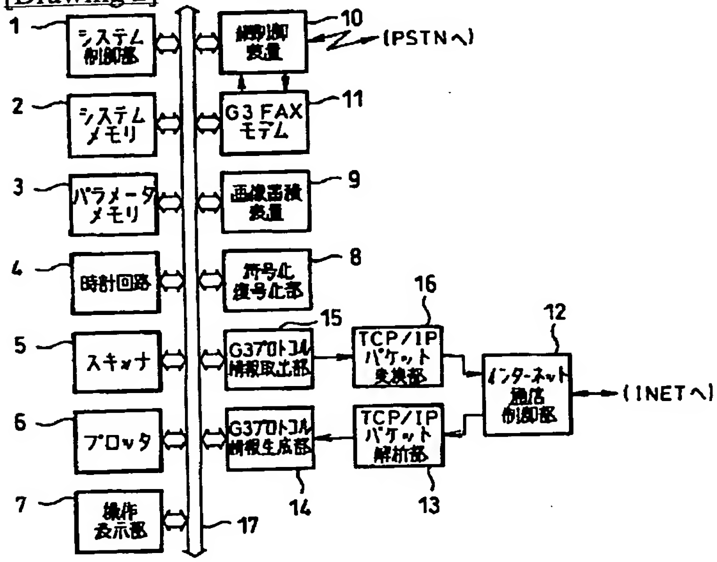
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

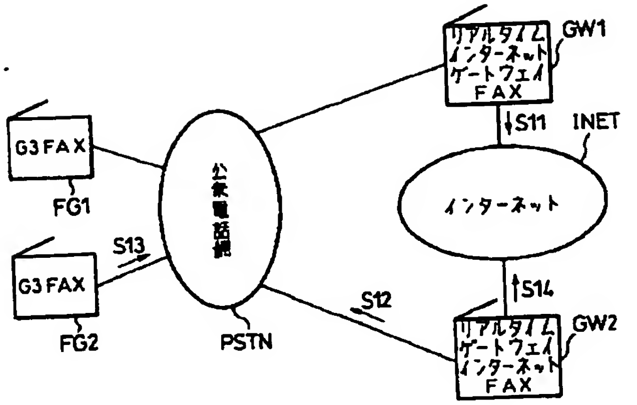
[Drawing 1]


リアルタイム
インターネット
ゲートウェイ
FAX
GW1
S2
G3FAX
S1
S3
FG1
公衆電話網
S4
INET
インターネット
G3FAX
S6
.FG2
PSTN
S5
S7
リアルタイム
ゲートウェイ
インターネット
FAX
GW2

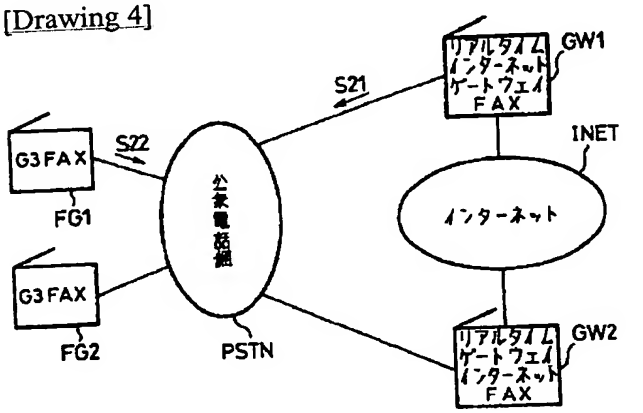
[Drawing 2]


1
システム
制御部
2
システム
メモリ
3
パラメータ
メモリ
4
時計回路
5
スキャナ
6
プロッタ
7
操作
表示部
17
網制御
装置
10
(PSTNへ)
G3 FAX
モデム
11
画像蓄積
装置
9
符号化
復号化部
8
15
G3プロトコル
情報取出部
16
TCP/IP
パケット
変換部
12
インターネット
通信
制御部
(INETへ)
G3プロトコル
情報生成部
TCP/IP
パケット
解析部
14
13

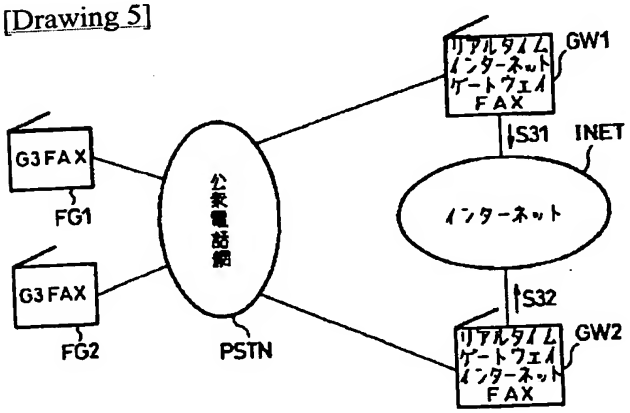
[Drawing 3]


リアルタイム
インターネット
ゲートウェイ
FAX
GW1
S11
INET
G3 FAX
FG1
公衆電話網
インターネット
S13
G3 FAX
FG2
PSTN
S12
S14
リアルタイム
ゲートウェイ
インターネット
FAX
GW2

[Drawing 4]


リアルタイム
インターネット
ゲートウェイ
FAX
GW1
S21
S22
G3 FAX
FG1
公衆電話網
INET
インターネット
G3 FAX
FG2
PSTN
リアルタイム
ゲートウェイ
インターネット
FAX
GW2

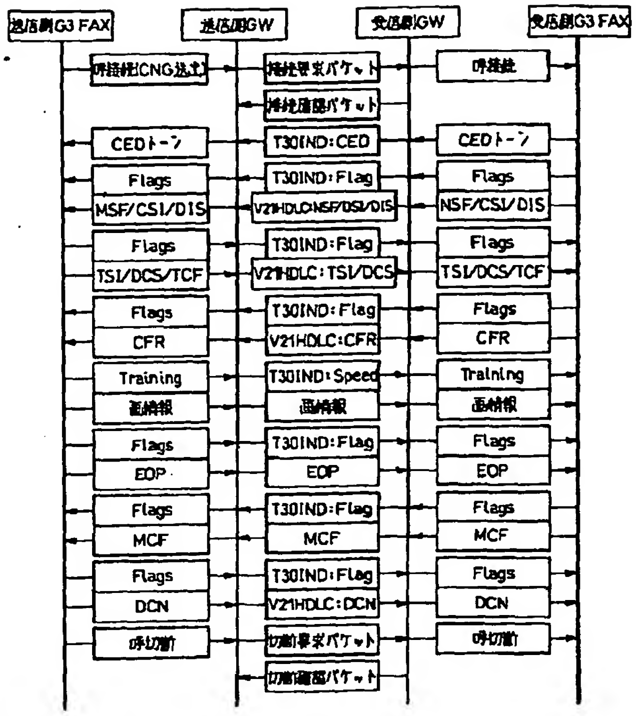
[Drawing 5]


リアルタイム
インターネット
ゲートウェイ
FAX
GW1
S31
INET
G3 FAX
FG1
公衆電話網
インターネット
G3 FAX
FG2
PSTN
S32
リアルタイム
ゲートウェイ
インターネット
FAX
GW2

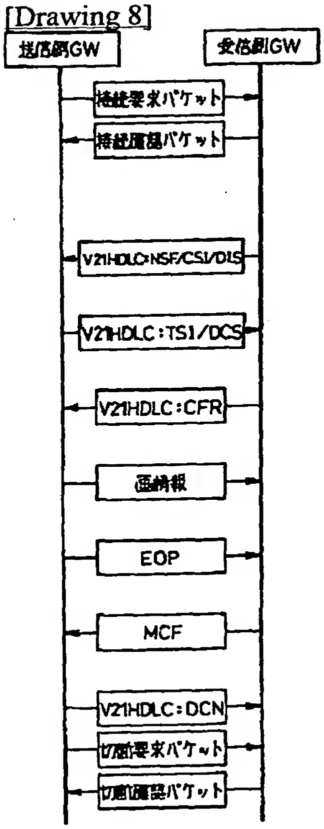
[Drawing 7]

プロトコル識別子
呼番号
メッセージタイプ
伝達能力
発信元番号
発信先番号
ユーザ・ユーザ

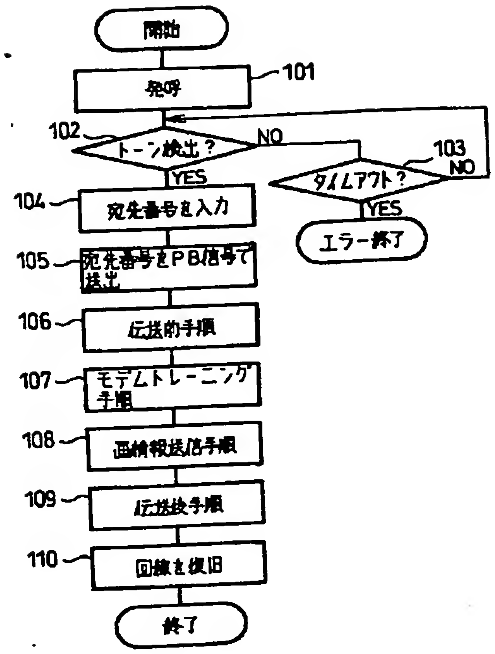
[Drawing 6]


送信側G3 FAX
送信側GW
受信側GW
受信側G3 FAX
呼接続(CNG送出)
接続要求パケット
呼接続
接続確認パケット
CEDトーン
T30IND:CED
CEDトーン
Flags
T30IND:Flag
Flags
MSF/CSI/DIS
V21HDLC:NSF/DSI/DIS
NSF/CSI/DIS
Flags
T30IND:Flag
Flags
TSI/DCS/TCF
V21HDLC:TSI/DCS
TSI/DCS/TCF
Flags
T30IND:Flag
Flags
CFR
V21HDLC:CFR
CFR
Training
T30IND:Speed
Training
画情報
画情報
画情報
Flags
T30IND:Flag
Flags
EOP
EOP
EOP
Flags
T30IND:Flag
Flags
MCF
MCF
MCF
Flags
T30IND:Flag
Flags
DCN
V21HDLC:DCN
DCN
呼切断
切断要求パケット
呼切断
切断確認パケット

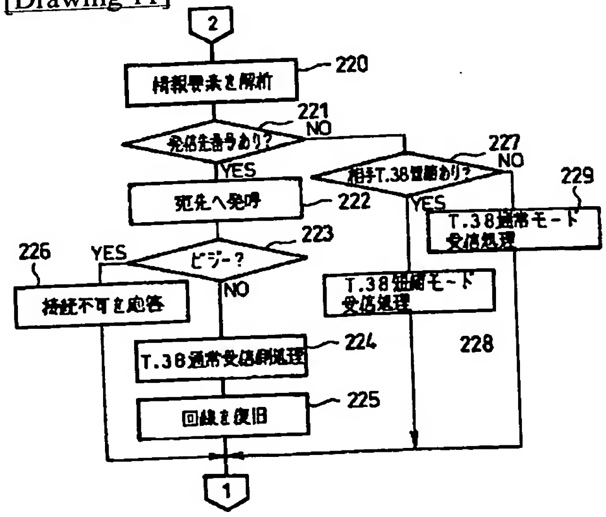
[Drawing 8]


送信側GW
受信側GW
接続要求パケット
接続確認パケット
V21HDLC:NSF/CSI/DIS
V21HDLC:TSI/DCS
V21HDLC:CFR
画情報
EOP
MCF
V21HDLC:DCN
切断要求パケット
切断確認パケット

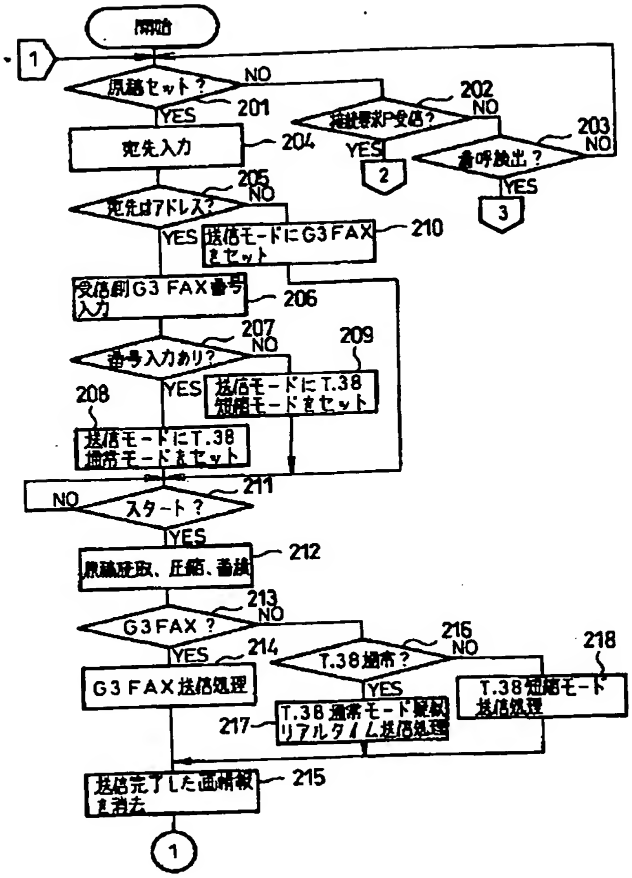
[Drawing 9]


開始
発呼
101
102
トーン検出？
NO
YES
103
タイムアウト？
NO
YES
エラー終了
104
宛先番号を入力
105
宛先番号をPB信号で送出
106
伝送前手順
107
モデムトレーニング手順
108
画情報送信手順
109
伝送後手順
110
回線を復旧
終了

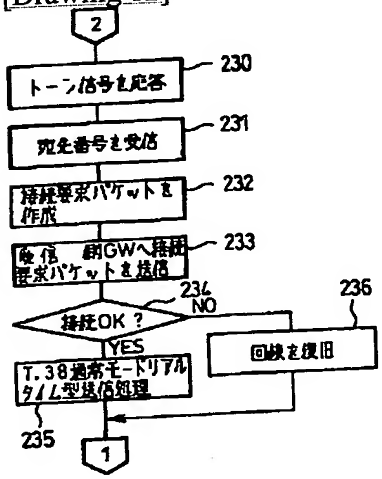
[Drawing 11]


2
220
情報要求を解析
221
NO
発信先番号あり？
YES
227
NO
相手T.38装置あり？
YES
229
T.38通常モード受信処理
宛先へ発呼
222
223
226
YES
ビジー？
NO
接続不可を応答
T.38短縮モード受信処理
224
T.38通常受信側処理
228
225
回線を復旧
1

[Drawing 10]


開始
1
原稿セット？
201
YES
NO
接続要求P受信？
202
NO
YES
2
着呼検出？
203
NO
YES
3
宛先入力
204
宛先はアドレス？
205
NO
YES
送信モードにG3FAXをセット
210
受信側G3 FAX番号入力
206
番号入力あり？
207
NO
YES
送信モードにT.38短縮モードをセット
209
208
送信モードにT.38通常モードをセット
スタート？
211
NO
YES
原稿読取、圧縮、蓄積
212
G3FAX？
213
NO
YES
G3 FAX送信処理
214
T.38通常？
216
NO
YES
T.38通常モード疑似リアルタイム送信処理
217
T.38短縮モード送信処理
218
送信完了した画情報を消去
215
1

[Drawing 12]


2
トーン信号を応答
230
宛先番号を受信
231
接続要求パケットを作成
232
受信側GWへ接続要求パケットを送信
233
接続OK？
234
NO
YES
回線を復旧
236
T.38通常モードリアルタイム型送信処理
235
1

[Translation done.]